

CHAPTER 1

PURPOSE AND NEED

1.0 INTRODUCTION, PURPOSE, AND NEED FOR ACTION

Warren E & P, Inc. (Warren) has notified the Bureau of Land Management (BLM), Rock Springs Field Office (RSFO) that Warren proposes to explore and potentially develop a shallow gas project located within the administrative boundary of the BLM Rock Springs Field Office. The proposed Pacific Rim Shallow Gas Project area (PRPA) is generally located in Townships 13, 14 and 15 North, and Ranges 100 through 101 West, 6th Principal Meridian, Sweetwater County, Wyoming (see Figure 1-1). The shallow gas wells, access roads, pipelines, power lines and compression facilities located on federal land would be permitted with the BLM and the Wyoming Oil and Gas Conservation Commission (WOGCC). Facilities located on State of Wyoming and privately owned surface would be permitted with the WOGCC.

Exploration and production of federal oil and gas leases by private industry is an integral part of the BLM's oil and gas policy. The BLM oil and gas program encourages development of domestic oil and gas reserves, as expressed in a variety of laws passed by Congress. Natural gas development is an integral part of the United States' energy future, and part of our current national energy policy.

The purpose and need for the proposed natural gas exploration and development project is to exercise the lease holders' rights within the project area to drill, complete, and operate additional natural gas wells, subject to applicable laws and stipulations of the lease. Exploration and production of natural gas, including methane gas from coal-bearing formations, is in accordance with the President's National Energy Policy, Executive Order 13212. The policy calls for federal agencies "to develop a national energy policy designed to help the private sector, and, as necessary and appropriate, State and local governments, promote dependable, affordable, and environmentally sound production and distribution of energy for the future." Natural gas is an integral part of the U.S. energy future due to its availability, the presence of an existing market delivery infrastructure, and the environmental advantages of clean-burning natural gas.

The purpose and need for this project is to allow the private land/mineral owner and federal lease holder (same) the opportunity to explore for and develop shallow gas within the project area. The Proposed Action would allow the lease holders to exercise their existing rights to drill for, extract, remove, and market gas products if exploration proves successful. Ancillary facilities such as compression facilities and power lines needed to allow for drilling, extraction, and production of natural gas are also proposed. National mineral leasing policies and the regulations by which they are enforced recognize the statutory right of lease holders to develop federal mineral resources to meet continuing needs and economic demands so long as undue and unnecessary environmental degradation is not incurred. Private land owners have the right to develop their holdings in accordance with state and local laws.

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1.1 PROJECT DESCRIPTION

The total project area encompasses 47,597.82 acres of land, more or less, of which approximately: **(1)** 41,738.60 acres are federal surface and minerals; **(2)** 1,319.38 acres are State of Wyoming surface and minerals; **(3)** 640 acres are State of Wyoming surface and federal minerals; **(4)** 640 acres are private surface and federal minerals; and **(5)** 3,259.84 acres are private surface and minerals. Existing access to the area consists of Wyoming Highway 430, Sweetwater County Road No. 24, and other existing or newly constructed roads.

The Pacific Rim Project overlies an area mostly unexplored for natural gas. Since 1954, one (1) producing well has been drilled and developed, twelve (12) natural gas wells have been drilled and shut in, and fifteen (15) non-producing wells have been drilled, plugged, and abandoned (WOGCC website 5/14/04).

Warren proposes exploratory drilling and potentially producing a maximum of 120 wells on 160-acre spacing. Drilling is expected to last approximately two to four years, with a projected life-of-project (LOP) of 10 to 20 years. Wells would target sandstone reservoirs and coal seams within the Almond Formation at depths of 1,000 to 6,500 feet. Gas produced would be from both coal seams (coalbed methane (CBM)) and adjacent sands. In addition to wellpads and associated construction, Warren anticipates that additional infrastructure such as access roads, compression facilities, and pipelines would be necessary to develop this resource. Additional gas volumes would be transported via existing trunk pipelines, but additional gathering and transmission pipelines are anticipated, depending on the drilling success. The Proposed Action is discussed in-depth in Chapter 2, Proposed Action and Alternatives.

The PRPA is located southeast of Rock Springs as shown on Figure 1-1, and contains federal, state, and private surface and minerals ownership. Total surface and mineral land areas and status are shown in Table 1-1.

Table 1-1. Surface and Mineral Ownership of the Pacific Rim Project Area.

Ownership	Surface Acres	Surface Percent	Mineral Acres	Mineral Percent
Federal (BLM)	41,738.6	87.7	43,018.6	90.4
Private	3,899.8	8.2	3,259.8	6.8
State of Wyoming	1,959.4	4.1	1,319.4	2.8
Total	47,597.8	100.0	47,597.8	100.0

1.2 RELATIONSHIP TO EXISTING PLANS AND DOCUMENTS

Resource Management Plan - The document which directs management of federal lands within the Rock Springs Field Office is the approved Green River Resource Management Plan (GRRMP), Decision Record approved 1997. The objective for management of oil and gas resources, as stated in the GRRMP, is to provide for leasing, exploration, and development of oil and gas while protecting other resource values. In addition, the GRRMP states public lands

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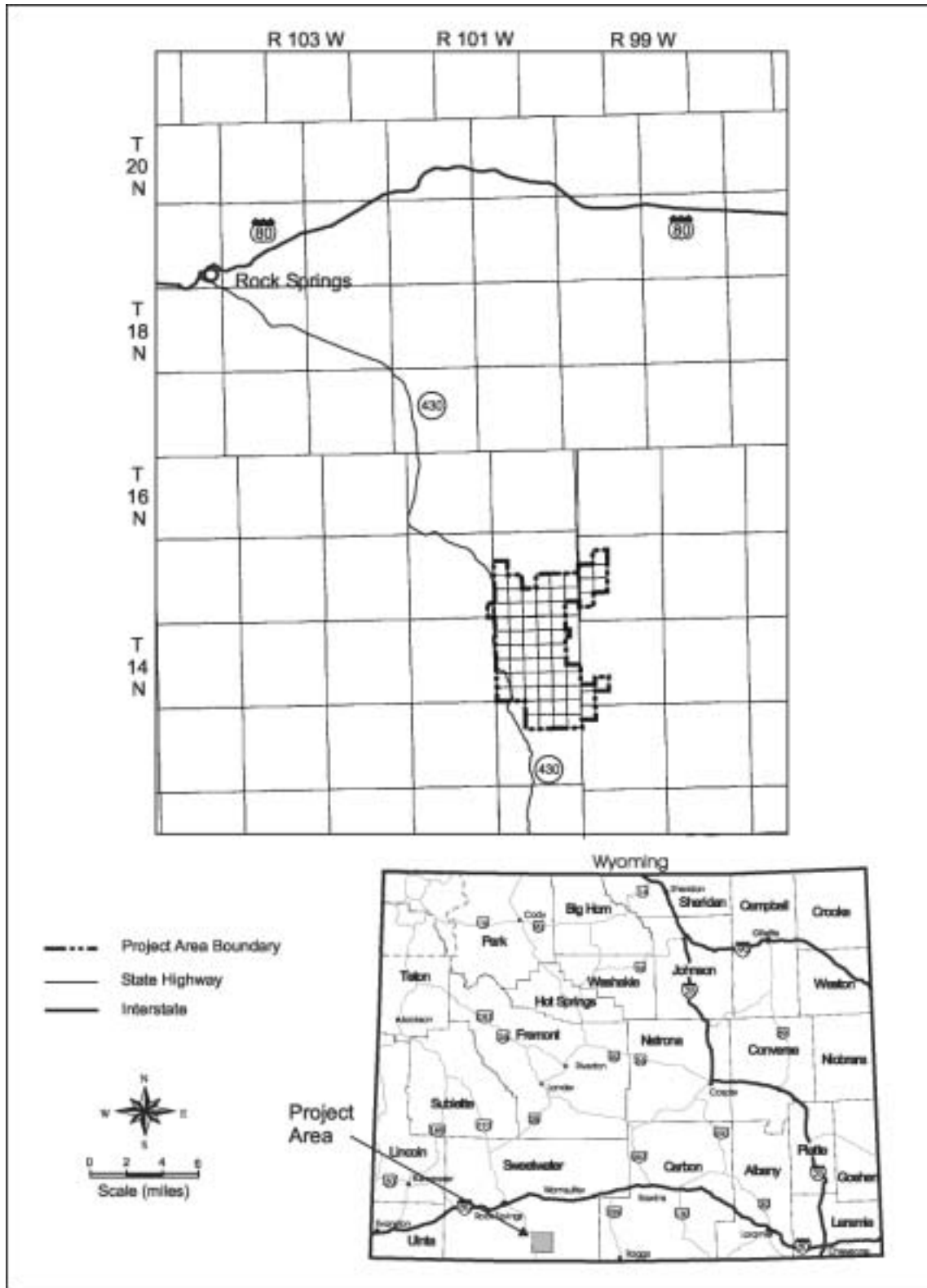


Figure 1-1. General Location Map, Pacific Rim Shallow Gas Project, Sweetwater County, Wyoming

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within the checkerboard area are open to mineral leasing and development (to promote mineral recovery) with appropriate mitigation on a case-by-case basis.

The development of natural gas within the Pacific Rim Unit is in conformance with the GRRMP. The reasonably foreseeable development analyzed in the GRRMP assumed 1,258 successful well completions under the proposed plan. As of September 2003, the RSFO has between 696 and 705 producing wells including 26 producing CBM wells (per preliminary review of raw data from WOGCC). The Proposed Action is within that analyzed under the GRRMP. The environmental analysis prepared for the proposed additional wells in the Pacific Rim Unit would incorporate decisions, terms, and conditions of use as described in the GRRMP. This analysis incorporates and tiers to the air quality analysis prepared for the Pinedale Anticline Natural Gas Project EIS (USDI, 2000) which updated the air quality analysis for the Kemmerer, Pinedale, and Rock Springs Field Offices' RMPs.

Other Environmental Documents – Continental Divide/Wamsutter II (CD/WII) EIS/ROD (USDI, 1998) includes all or a portion of the PRPA in its Cumulative Impacts Analysis Area (CIAA). The Pinedale Anticline EIS/ROD (USDI, 2000), CD/WII EIS/ROD (USDI, 1998), and Desolation Flats DEIS (USDI, 2003) include the PRPA for air impacts analysis only. The Decision Record, Finding of No Significant Impact, Changes to Modification/Corrections to the Environmental Assessment for the Vermillion Basin Natural Gas Exploration and Development Project (USDI, 2002), Appendix D analyzes directional and horizontal drilling techniques in the Almond formation.

Use Authorizations - Use authorizations (i.e., rights-of-way, permits, etc.) for roads, powerlines, pipelines, compressors, and well site facilities would be processed through the BLM Application for Permit to Drill (APD) and Sundry Notice permitting process as long as the facilities remain on-lease and are owned and operated by the unit operator. Any sales pipeline located on-lease or any facility located off-lease would require individual rights-of-way. All individual permits located on public land would be subject to further environmental review.

Lease Stipulations - Some federal oil and gas leases within the proposed area may include special stipulations on occupancy. These stipulations are in addition to the standard lease terms and are designed to protect surface resources such as soils, water, and wildlife by restricting periods of activity or areas of disturbance. Application of these lease stipulations would be handled on a case-by-case basis for each APD submitted to the BLM.

1.3 NATIONAL ENVIRONMENTAL POLICY ACT

The proposed project has been analyzed in accordance with the requirements of the National Environmental Policy Act (NEPA). To comply with NEPA and the Council on Environmental Quality (CEQ) regulations, which implement NEPA, the BLM is required to prepare an environmental analysis. This environmental assessment (EA) serves several purposes.

- It provides the public and government agencies with information about the potential environmental consequences of the project and alternatives;
- It identifies all practicable means to avoid or minimize environmental harm from the project and alternatives;

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- It provides the responsible official with information upon which to make an informed decision regarding the project.

NEPA requires Federal agencies to use a systematic, interdisciplinary approach to ensure the integrated use of natural and social sciences in planning and decision making. Factors considered during the environmental analysis process regarding the Pacific Rim Shallow Gas project include the following:

- A determination of whether the proposal and alternatives are in conformance with BLM policies, regulations, and approved resource management plan direction.
- A determination of whether the proposal and alternatives are in conformance with policies and regulations of other agencies likely associated with the project.

This EA is not a decision document. This EA documents the process used to analyze the potential impacts of the proposed action and alternatives and discloses the effects of the proposed action and alternatives to that action. A Decision Record (DR), signed by the responsible official (Field Manager, Bureau of Land Management, Rock Springs Field Office) will document the final decision regarding the selected alternative. The BLM will document whether or not significant impacts would occur with implementation of any of the alternatives. If the BLM determines that no significant impacts would occur, a Finding of No Significant Impact (FONSI) Decision Record would be issued. If significant impacts are identified, the BLM decision would be to complete an Environmental Impact Statement (EIS), with subsequent public input and additional analysis of the alternatives.

1.4 LAND AND RESOURCE MANAGEMENT ISSUES AND CONCERNS

In accordance with NEPA and CEQ regulations 40 CFR 1501.7, an early and open process for determining the scope of issues to be addressed is required and used for identifying the significant issues related to a proposal. In compliance with this procedural requirement, the RSFO BLM released a scoping notice on October 16, 2003 for a 30-day review period. Fifteen comment letters were received. The scoping process led to the identification of the following land and resource management issues and concerns potentially associated with the Proposed Action:

- Potential increased traffic and associated impacts on existing county, state, and BLM roads.
- Potential socio-economic impacts to local communities.
- Potential impacts to surface and groundwater resources, including sedimentation, salinity, water discharge to the Colorado River system, and CBM produced water quality issues.
- Potential impacts to sensitive soils within the project area.
- Potential impacts from emissions resulting from additional drilling and production activities.
- Potential impacts related to reclamation of disturbed areas and control of noxious weed invasions.

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- Potential conflicts with livestock management operations in the analysis area, including possible impacts to range improvement projects.
- Potential impacts to cultural and historical values within the analysis area.
- Potential impacts to wildlife habitats, especially habitat fragmentation, within the analysis area, including big game, greater sage grouse, and raptors.
- Potential impacts to the Salt Wells Wild Horse Herd Management Area and wild horses.
- Potential impacts to listed, or proposed for listing, threatened and endangered plant and animal species, including potential Colorado River depletion and effects on downstream listed fish species.
- Potential cumulative effects of drilling and development activities when combined with other ongoing and proposed developments on lands adjacent to the Pacific Rim project area.
- Potential conflicts between mineral development activities and recreational opportunities.
- Application and acquisition of appropriate permits.
- Potential impacts to sensitive plant species, including Nelson's milkvetch and Wyoming Tansymustard.
- Potential impacts to Special Status Species or species at risk, including Black-footed ferret, Ute ladies'-tresses, Yellow-billed Cuckoo, migratory birds, and Mountain plover.
- Potential impacts with known paleontological sites.
- Potential impacts to roadless lands proposed for wilderness status.

Certain issues were determined to not be "adverse issues related to the proposed action" (40 CFR 1501.7) because they are not potentially affected or impacted by the proposal. These issues brought forth during public scoping and reasons for eliminating that issue from consideration in the analysis are shown below:

- **Subsidence:** Although it is possible for subsidence to occur, experience in the RSFO has shown subsidence is only likely to occur when material (i.e., coal, trona) is extracted. Extraction of coal is not proposed for this action and only partial dewatering of the coal seam is necessary for the gas to desorb. The coal seam is located in excess of 1,500 feet deep and the integrity of the formations above (i.e., sandstone) would preclude any subsidence from occurring at the surface.
- **Migration of natural gas to the surface:** The targeted natural gas reservoir is confined, and fractures or other structures that would allow the gas to move from the formation are not present. The layered overburden includes sandstone, siltstones and of shale. Migration of gas to the surface is extremely unlikely. Large quantities of gas would need to migrate through more than 1,500 feet of layered rock to reach the surface, an extremely unlikely occurrence. Migration is further prohibited by well completion processes, designed and implemented to prevent the loss of the resource being produced. The area between the boreholes and casing will be cemented from surface to total depth, preventing the gas from migrating other than through the production pipe.

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1.5 AUTHORIZING ACTIONS

The proposed federal, state, county, and local actions required to implement the Pacific Rim Shallow Gas Project are listed in Table 1-2.

Table 1-2. Federal, State, and County Authorizing Actions.

AGENCY	NATURE OF ACTION
DEPARTMENT OF THE INTERIOR	
Bureau of Land Management (Rock Springs Field Office)	NEPA compliance and approval of ROW applications for pipelines; temporary use permits; approval of APD's and Sundry Notices.
U.S. Fish and Wildlife Service	Coordination, consultation, and impact review on federally listed or proposed for listing, threatened or endangered species of fish, wildlife, and plants. Migratory bird impact coordination.
U.S. ENVIRONMENTAL PROTECTION AGENCY	
	Spill Prevention Control and Countermeasures (SPCC) Plans. Regulate hazardous waste treatment, storage, and /or disposal.
DEPARTMENT OF THE ARMY	
U.S. Army Corps of Engineers	Issue permits(s) (Section 404) for placement of dredged or fill material in or excavation of waters of the U.S. and their adjacent wetlands.

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AGENCY	NATURE OF ACTION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY	
Water Quality Division	<p>National Pollution Discharge Elimination System (NPDES) permits for discharging waste water and storm water runoff.</p> <p>Conformance with all surface water standards; permit to construct and permit to operate.</p> <p>Permits to construct settling ponds and waste water systems, including ground water injection and disposal wells.</p> <p>Regulate disposal of drilling fluids from abandoned reserve pits.</p> <p>Administrative approval for discharge of hydrostatic test water.</p>
Air Quality Division	<p>New Source Review (NSR) Permit: All pollution emission sources, including compressor engines and portable diesel and gas generators.</p>
WYOMING STATE ENGINEERS OFFICE	
	<p>Issue permits to appropriate groundwater and surface water.</p> <p>Issue temporary water rights for construction permits to appropriate surface water.</p>
WYOMING STATE HISTORIC PRESERVATION OFFICE	
	<p>Consultation concerning identification, evaluation, assessments effect and treatment of adverse effects on historic properties.</p>

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AGENCY	NATURE OF ACTION
SWEETWATER COUNTY	
	<p>Zoning certificates for site development and construction.</p> <p>Small wastewater system permits, where applicable.</p> <p>Road use agreements and/or oversize trip permits when traffic on county roads exceeds established size and weight limits or where the potential for excessive road damage exists.</p> <p>Construction and conditional use permits for all new structures.</p> <p>Zoning changes where applicable.</p> <p>Control of noxious weeds.</p> <p>Permits to bore or trench county roads or for any crossing or access off a county road.</p>
WYOMING DEPARTMENT OF TRANSPORTATION	
	<p>Conformance with applicable size and weight limits for trucks.</p>
WYOMING OIL AND GAS CONSERVATION COMMISSION	
	<p>Primary authority for drilling on state and privately held mineral resources and secondary authority for drilling on federal lands.</p> <p>Authority to allow or prohibit flaring or venting of gas on private or state owned minerals</p> <p>Regulate drilling and plugging of wells operating on private or state owned minerals.</p> <p>Aquifer Exemption Permit.</p> <p>Directional drilling.</p> <p>Rules and regulations governing drilling units.</p> <p>Gas injection well permits.</p>